

CLAIMS

1. (previously presented) A stretch film having three or more layers wherein:

A) at least one layer comprises a polyethylene characterized as having:

- 5 i) a density from about 0.9 g/cc to about 0.96 g/cc;
 ii) a melt index from about 0.5 g/10 minutes to about 10 g/10 minutes, measured in accordance with ASTM D 1238, condition 190°/2.16 kg; and
 iii) a molecular weight distribution from about 2.5 to about
10 4.5; and

B) wherein at least one non-surface layer comprises at least one propylene polymer comprising at least 50% by weight of units derived from propylene; and

15 C) wherein the stretch film is characterized as having an ultimate stretch of at least 200% , a Dart A of at least 430 gms/mil and a CF of 5% or less.

2. (Cancelled)

3. (previously presented) The stretch film of Claim 1 wherein the film comprises at least 50 % by weight polyethylene.

20 4. (previously presented) The stretch film of Claim 1 wherein the film is in the range of 0.4 to 3 mil in thickness.

5. (previously presented) The stretch film of Claim 4 wherein the film is in the range of 0.7 mils to 3 mils.

25 6. (previously presented) The stretch film of Claim 1 having a Dart A greater than 570 gms/mil.

7. (previously presented) The stretch film of Claim 1 having a Dart A greater than 700 gms/mil.

8. (previously presented) The stretch film of Claim 1 having a CF of 3% or less.

30 9. (previously presented) The stretch film of Claim 1 having an ultimate stretch of at least 300%.

10. (Cancelled)

11. (Cancelled)

12. (previously presented) The stretch film of Claim 1 comprising a homogeneous polymer component.

13. (previously presented) The stretch film of claim 1 wherein the film is made at an output rate of at least about 6 pounds/hour/inch of die width.

14. (previously presented) The stretch film of claim 1, wherein the film has a tensile stress at break of at least 5000 psi.

15. (previously presented) The stretch film of Claim 14 further characterized as having a Dart A of at least 430 gms/mil

16. (Cancelled)

17. (Cancelled)

18. (previously presented) A stretch film having an ultimate stretch of at least 200%, a Dart A of at least 430 gms/mil and a CF of 5% or less, and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer comprising at least 50% by weight of units derived from propylene, and at least one other layer comprises an ethylene polymer composition, wherein the ethylene polymer composition comprises:

(A) from about 10 percent (by weight of the total composition) to about 95 percent (by weight of the total composition) of at least one ethylene interpolymer having:

(i) a density from about 0.89 g/cm³ to about 0.935 g/cm³,

(ii) a melt index (I₂) from about 0.001 g/10 minutes to about 10 g/10 minutes,

(iii) a slope of strain hardening coefficient greater than or equal to 1.3, and

(iv) a Composition Distribution Index (CDBI) greater than 50 percent; and

(B) from about 5 percent (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one ethylene polymer having a density from about 0.93 g/cm³ to about 0.965 g/cm³ and a linear polymer fraction, as determined using temperature rising elution fractionation (TREF).

19. (previously presented) A stretch film having an ultimate stretch of at least 200%, a Dart A of at least 430 gms/mil and a CF of 5% or less,

and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer comprising at least 50% by weight of units derived from propylene, and at least one other layer comprises an ethylene polymer composition, wherein the ethylene polymer composition comprises:

5 (A) from about 10 percent (by weight of the total composition) to about 100 percent (by weight of the total composition) of at least one ethylene interpolymer having:

(i) a density from about 0.89 g/cm³ to about 0.935 g/cm³,

10 (ii) a melt index (I₂) from about 0.001 g/10 minutes to about 10 g/10 minutes,

(iii) a molecular weight distribution, Mw/Mn, from about 2 to about 4, and

(iv) a Composition Distribution Index (CDBI) greater than 50 percent; and

15 (B) optionally, from about 5 percent or less (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one ethylene polymer having a density from about 0.93 g/cm³ to about 0.965 g/cm³ and a linear polymer fraction, as determined using temperature rising elution fractionation (TREF).

20 20. (previously presented) The stretch film of claim 19 wherein (A) has a melt index from about 0.001 g/10 minutes to about 1 g/10 minutes.

21. (previously presented) The stretch film of claim 19 wherein (A) has a melt index from about 0.001 g/10 minutes to about 0.5 g/10 minutes.

22. (previously presented) A stretch film having an ultimate stretch of
25 at least 200%, a Dart A of at least 430 gms/mil and a CF of 5% or less, and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer comprising at least 50% by weight of units derived from propylene, and at least one other layer comprises an ethylene polymer composition, wherein the composition comprises:

30 (A) an interpolymer having a narrow molecular weight distribution and a narrow composition distribution breadth index (CDBI), defined as the weight percent of the polymer molecules having a comonomer content within 50 percent of the median total molar comonomer content, which is greater than about 50 percent and a degree of branching less than or equal to 2

methylys/1000 carbons of about 15 percent (by weight) or less and having an aluminum residue content of less than or equal to about 250 ppm present in the interpolymer composition, said interpolymer A being present in an amount of from about 15 to about 85% by weight based on the combined

5 weight of Components A and B; and

(B) an interpolymer having a broad molecular weight distribution and a broad composition distribution and a degree of branching less than or equal to 2 methylys/1000 carbons of about 10 percent (by weight) or more and a degree of branching greater than or equal to 25 methylys/1000 carbons
10 of from about 25 percent (by weight) or less present in the interpolymer composition, said interpolymer B being present in an amount of from about 15 to about 85% by weight based on the combined weight of Components A and B.

23. (previously presented) The film of any of claims 18-22, wherein the
15 ethylene polymer composition comprises a skin layer.